12-2015

Individual Differences in Anxiety Sensitivity and Emotional Avoidance: Potential Links in the Association between Internalizing Problems and Peer Victimization

Juventino Hernandez Rodriguez
University of Arkansas, Fayetteville

Individual Differences in Anxiety Sensitivity and Emotional Avoidance: Potential Links in the Association between Internalizing Problems and Peer Victimization

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts in Psychology

by

Juventino Hernandez Rodriguez
Arizona State University
Bachelor of Arts in Psychology, 2011

December 2015
University of Arkansas

This thesis is approved for recommendation to the Graduate Council.

_____
Dr. Tim Cavell
Thesis Chair

_____
Dr. Ana Bridges
Committee Member

_____
Dr. Ellen Leen-Feldner
Committee Member

Abstract

Chronic peer victimization has been linked to short- and long-term problems such as anxiety, depression, and aggression (Hawker & Bouton, 2000; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Reijntjes, Kamphuis, Prinzie, Boelen, van der Schoot, & Telch, 2011). Most children are able to escape the role of stable victim, but some struggle to end victimization and the negative trajectory associated with it. The present study explored individual differences in anxiety sensitivity and emotional avoidance, developmental vulnerabilities that heighten children's risk for internalizing problems, as possible predictors of children's level of peer victimization. Participants were 677 fourth-grade students and their teachers. Multi-informant path analysis were used to examine the degree to which these developmental vulnerabilities predict peer victimization in concert with or independent of children's internalizing problems. Results found anxiety sensitivity or emotional avoidance were not directly related to peer victimization; however, anxiety sensitivity was related to internalizing symptoms, which in turn, were related to peer victimization.

Keywords: peer victimization, bullying, anxiety sensitivity, emotional avoidance

Table of Contents

Individual Differences in Anxiety Sensitivity and Emotional Avoidance: Potential Links in the Association between Internalizing Problems and Peer Victimization

Introduction

Research consistently reveals a relation between internalizing symptoms and peer victimization, including meta-analytic evidence that heightened levels of peer victimization predict later internalizing symptoms (Hawker & Boulton, 2000; Reijntjes, Kamphuis, Prinzie, & Telch, 2010). Less clear is the degree to which internalizing symptoms place children at risk for peer victimization. In this study, short-term longitudinal data are used to test whether individual differences in anxiety sensitivity and emotional avoidance, known risk factors for internalizing symptoms, can predict children's peer victimization experiences.

Peer Victimization

Peer victimization is described as deliberate, consistent, negative behavior by one or more people directed against an individual that results in harmful effects and is marked by an actual or perceived power imbalance (Olweus, 1993; Olweus & Limber, 2010). Peer victimization is conceptualized as a group process that is maintained in part by active and passive peer behaviors. Active behaviors include joining bullying behavior and passive behaviors include being a bystander to bullying incidents (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996). Bullying takes form in different ways. The three main forms are: verbal, physical, and relational bullying (Olweus, 1993).

In the U.S., about one in four children report being bullied at some point in time (Nansel et al., 2001). For frequent victimization (weekly or more often), prevalence estimates range from 6% to 15% (Smith & Shu, 2000; Whitney & Smith, 1993). Research on the correlates of peer victimization have examined variables across personal, academic, interpersonal, and contextual domains (see Card, Isaacs, & Hodges, 2007 for review; Rigby & Slee, 1999). Researchers note victims having high levels of internalizing problems, externalizing problems, and a poor self-concept (Card et al., 2007). In school settings, chronic victims have reported greater absenteeism, poor academic performance, and poor perception of academic achievement (Card et al., 2007). Interpersonally, victims tend to have low levels of peer acceptance, high levels of rejection from peers, and negative peer reputation or social status (Card et al. 2007). Longitudinal studies have also documented long-term effects of peer victimization. Studies have found victimization leads to a diminished self-concept, internalizing and externalizing problems (Reijntjes et al., 2010; Seals & Young, 2003). Victimization has also been found to predict disliking school (Kochenderfer & Ladd, 1996), and low social status (Hanish & Guerra, 2000; Hodges & Perry, 1999).

Peer Victimization & Internalizing Symptoms

Numerous studies have shown peer victimization is associated with anxiety, depression, loneliness, and interpersonal withdrawal (see Card, Isaacs, & Hodges, 2007 for review). In a meta-analytic review that included over twenty cross-sectional studies, Hawker and Boulton (2000) found that children who were victimized had significantly higher levels of internalizing symptoms including anxiety, depression, and loneliness than their non-victimized peers. After controlling for shared method variance, mean effect sizes (*Pearson's r)* were .19 for anxiety and .29 for depression.

Unclear from this review is whether peer victimization is an antecedent or consequence of internalizing symptoms. Some researchers posit that the experience of peer victimization is corrosive and can lead to symptoms of depression and anxiety. Several studies document that victims of school bullying are at risk for depression and anxiety disorders (Due et al., 2005; Kaltiala-Heino, Rimpela, Rantanen, & Laippala, 2000; Kumpulainen, Rasanen, & Puura, 2001), but it is also possible that internalizing problems precede and contribute to children's involvement in peer victimization (Hanish & Guerra, 2000).

Findings from several longitudinal studies help discern whether peer victimization precedes the emergence of internalizing symptoms or vice versa (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Hanish & Guerra, 2002; Zwierzynska, Wolke, & Lereya, 2013). To clarify the relation between peer victimization and internalizing problems, Reijntjes and colleagues (2010) conducted a meta-analytic review of 18 longitudinal studies. Each study explored prospectively possible connections between peer victimization and internalizing symptoms. These investigators found evidence that peer victimization predicts later internalizing problems (mean effect size, r = .18), but also that internalizing problems can predict later peer victimization (mean effect size, r = .08). This suggests a bidirectional or reciprocal influence between these two variables, contributing perhaps to a vicious, chronic cycle of peer victimization and internalizing symptoms. However, given the modest effect sizes of these relations, there is also much to learn about how these two phenomena inter-relate. Moreover, estimates of peer victimization predicting to internalizing symptoms are almost twice the size of estimates of internalizing symptoms predicting peer victimization (Reijntjes et al., 2010). Because not all children who exhibit internalizing symptoms are at risk for peer victimization, the role of internalizing symptoms as a risk factor for peer victimization is poorly understood. What is needed is greater

specification of this relation as well as recognition that other factors can possibly co-contribute to the emergence of problematic levels of peer victimization.

One possibility is that other factors such as children's friendships or peer relationships are operating in concert with internalizing problems to predict peer victimization. Children who are anxious have been found to be less liked and tend to be rejected by peers (Reijntes et al. 2010). Another possibility is that internalizing symptoms are mere markers for other variables that confer risk for peer victimization. For example, Schwartz and colleagues (1993) found that behaviors that are common among children with internalizing problems (e.g., crying easily, being passive in conflict, social withdrawing) can place a child at risk for future chronic peer victimization. It is also possible that factors predictive of internalizing symptoms place children at risk for peer victimization independent of their risk for internalizing symptoms. Needed are studies that examine the predictive role of variables that put children at risk for both internalizing symptoms and the mismanagement of peer interactions that could lead to victimization. In the present study, I examine two such vulnerabilities: anxiety sensitivity and emotional avoidance.

Anxiety Sensitivity

Anxiety sensitivity is defined as the fear of experiencing anxiety-related sensations (Reiss & McNally, 1985). Anxiety sensitivity has been conceptualized as a trait-like cognitive vulnerability that can intensify existing levels of anxiety and have individuals with heightened levels of anxiety more prone to misinterpret somatic sensations (e.g., heart palpitations, sweaty hands) as danger signals, which lead to elevated levels of felt anxiety. Reiss' theory of anxiety sensitivity suggests that anxiety sensitivity stems from the interaction of genetic dispositions (Stein, Jang, & Livesley, 1999) and adverse direct or indirect learning experiences (Reiss, 1991; Stewart et al., 2001). Research and theory on the etiology of childhood anxiety disorders suggest stable, trait-like factors such as anxiety sensitivity can precede and contribute to the emergence

of those disorders (Reiss, 1991). Numerous studies have demonstrated associations between anxiety sensitivity and anxiety disorders in both adult (Donnell & McNally, 1989; Holloway & McNally, 1987) and child samples (Rabian, Peterson, Richters, & Jensen, 1993; Reiss, Silverman, & Weems, 2001; Kearney, Albano, Eisen, Allan, & Barlow, 1997). For example, Rabian and colleagues (1993) found children who had an anxiety disorder, confirmed by a structured interview, were more likely to have higher levels of anxiety sensitivity compared to children who had no diagnosis. Kearney and colleagues (1997) found children who had panic disorder had higher levels of anxiety sensitivity than children without panic disorder. Additionally, some child studies have also explored associations among anxiety sensitivity and depression. Weems, Hammond-Laurence, Silverman, and Ferguson (1997) found anxiety sensitivity was related to depression even after controlling for anxiety symptoms (e.g., worry).

Although anxiety sensitivity has been studied extensively in conjunction with child anxiety disorders, very little work has examined the extent to which anxiety sensitivity is associated with internalizing problems generally or depressive symptoms more specifically. The studies that are available suggest a link between anxiety sensitivity and depression though it remains understudied. Also lacking is research on the association between anxiety sensitivity and social difficulties that are related to child anxiety disorders. Because anxiety sensitivity involves an increased risk of anxiety and mood disorders, and anxiety disorders have been shown to put children at risk for later difficulties such as peer victimization, it is possible that children with high levels of anxiety sensitivity are at risk for difficulties beyond anxiety disorders. A link between anxiety sensitivity and peer victimization seems plausible given research indicating that bullying behavior is possibly reinforced by the emotional displays of child victims (Perry, Kusel, & Perry, 1988). It has been theorized that victimized children indirectly procure victimization by

signaling they are unable to defend themselves. For example, victimized children cry easily, lack humor, and are withdrawn (Boivin & Hymel, 1997; Perry, Williard, & Perry, 1990; Schwartz, Dodge, & Coie, 1993). Subsequently, they reinforce their bullies by becoming submissive. This may point to an underlying, crosscutting vulnerability. It could also be that children high in anxiety sensitivity indirectly confer victimization by exhibiting anxious behaviors and thus have a devalued role in the peer hierarchy. Children exhibiting high levels of anxiety sensitivity may also have difficulty recruiting and maintaining friends; having friends is theorized to provide protection against bullies (Hodges, Malone, & Perry, 1997).

Research examining the link between anxiety sensitivity and peer victimization is limited. In a study examining the association between childhood teasing and social anxiety in adulthood, Roth, Coles, and Heimberg (2002) found anxiety sensitivity was more strongly related to childhood teasing than childhood worry. A more recent study found that anxiety sensitivity predicted peer-rated peer victimization in a cross-sectional study of bullied children in 4th and 5th grade (Pastrana et al., 2012).

Emotional Avoidance

Experiential avoidance has been defined as learned behavior characterized by the avoidance of unwanted private experiences and associated cues by attempting to alter the form or frequency of the aversive internal experience (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Experiential avoidance can take the form of avoidance or escape of the particular private experience. *Emotional avoidance* is a type of experiential avoidance where relevant aspects of the experience a person is trying to avoid or escape are specific to emotion or cognitions (Hayes et al., 1996).

Experiential avoidance has been posited to be a generalized psychological vulnerability that underlies several forms of psychopathology (Hayes et al., 1996), including anxiety disorders

(Eifert & Forsyth, 2005; Forsyth, Eifert, & Barrios, 2006). Experiential avoidance has also been found to positively correlate with anxiety and fear in healthy adults (Hayes et al., 2004). In addition, laboratory studies have demonstrated healthy adults high in experiential avoidance are more likely to endorse fear and panic symptoms than adults low in experiential avoidance after undergoing panicogenic fear challenge paradigms (i.e., inhalations of carbon dioxide enriched air; Feldner, Zvolensky, Eifert, & Spira, 2003; Karekla, Forsyth, & Kelly, 2004). Furthermore a recent meta-analytic review that explored emotion regulation strategies across psychopathology revealed medium to large effect sizes between avoidance and anxiety (mean effect size $r = .37$), and between avoidance and depression (mean effect size $r = .48$).

Empirical evidence also suggests rigid, inflexible attempts to regulate emotion-laden events are a main component in the development and maintenance of internalizing disorders in youth (Campbell-Sills, Barlow, Brown, & Hofmann, 2007; Suveg & Zeman, 2004). Though no research has specifically linked avoidance to childhood internalizing disorders, it is theorized that avoidance can perhaps intensify anxiety and sadness (Southam-Gerow & Kendall, 2002). Also, research on children's coping strategies has found that avoidant-coping can increase the risk that children will develop anxiety disorders (Manassis & Bradley, 1994; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Avoidant coping is characterized by procrastinating, avoiding of anxiety-provoking stimuli, and ignoring warning signals in the environment (Roth & Cohen, 1986).

In children, the ability to regulate emotions is considered an essential determinant of overall well being and functioning (Calkins & Hill, 2007), and the inability to regulate emotions is related to the development of psychopathology (Suveg, Southam-Gerow, Goodman, &

Kendall, 2007). Thus, avoidant coping and emotion suppression can both be considered examples of experiential avoidance.

Research on children's peer victimization experiences has not directly examined the role of experiential avoidance or the subtype of emotional avoidance. Studies have examined self-regulatory strategies (e.g., coping strategies, emotion regulation) that children use in response to instances of peer victimization. Several studies reveal strong positive associations between victimization-specific measures of avoidant self-regulatory strategies and the risk of peer victimization (e.g., Hunter & Boyle, 2004; Kochenderfer-Ladd & Skinner, 2002; McLaughlin, Hatzenbuehler, & Hilt, 2009; Roecker Phelps, 2001; Rosen, Milich, & Harris, 2012; Visconti, Sechler, & Kochenderfer-Ladd, 2013). For example, Rosen and colleagues (2012) studied whether dysregulated emotional reactivity was related to concurrent and subsequent peer victimization in grade-school children. Dysregulation of emotions was conceptualized as the inability to regulate emotions when faced with social and nonsocial provocations. Rosen et al. discovered that dysregulated emotional reactivity was related to current peer victimization experiences and to emotional distress related to peer victimization experiences. Dysregulated emotional reactivity was also predictive of peer victimization experiences six months later, above and beyond baseline levels of peer victimization.

A tendency to engage in emotional avoidance may be linked to peer victimization because bullied children use more internalizing coping strategies and less problem-solving strategies. There may be value in looking at the relation between peer victimization and children's broader tendencies to engage in emotional avoidance. Implicit here is that this tendency is a developmental precursor to such peer experiences and could influence how children respond to those experiences.

Purpose of the Proposed Study

In the current study, the overarching goal is to examine the degree to which anxiety sensitivity and emotional avoidance, either alone or in combination with internalizing symptoms, predict later peer victimization. Specifically, I predicted both vulnerabilities will positively predict children's level of internalizing symptoms. I also expected for children's level of internalizing symptoms to positively predict the degree to which children are victimized by peers. Given my outlined theoretical rationale stated above, I also predict both anxiety sensitivity and emotional avoidance will positively predict the degree to which children are victimized by peers, controlling for their baseline level of internalizing symptoms. Also, I predict both anxiety sensitivity and emotional avoidance will moderate the relation between baseline levels of peer victimization and later peer victimization, when controlling for baseline level of internalizing symptoms. The rationale is that children who report high levels of anxiety sensitivity and emotional avoidance will experience more initial victimization than children who report low levels of anxiety sensitivity and emotional avoidance.

Method

Participants

Fourth-grade students ($N = 677$) and their teachers ($N = 37$) were recruited for the proposed study. The participants were from ten public elementary schools in northwest Arkansas. The mean age of the students was 9.31 (ages 9-10), and 52% of the students were girls. Their ethnic/racial background was Hispanic/Latino (41.2%), Non-Hispanic White (29.8%), Pacific Islander (9.9%), and other (19.1%). The languages spoken at home, based on self-report, were English (75%), Spanish (48%), and Marshallese (10%).

Procedure

Written consent and child assent was required for all participants, including teachers. Teachers sent consent/assent forms home via weekly folders used routinely to transport other

school-related materials to parents. Efforts to recruit children included the following incentives: a) classes in which at least 65% of students returned consent/assent forms, irrespective of the decision to participate, received a $25 gift card to be used for a class activity, and b) the school that returned the highest percentage of consent/assent forms (again, regardless of the decision to participate) received a visit from the spirit squad (i.e., mascot, cheerleaders, and dance team) of a local university.

Trained graduate students and undergraduate research assistants administered questionnaires at three time points. Time 1 and Time 2 administration took place during the fall semester approximately 8 weeks apart. Time 3 administration occurred in late spring, approximately 22 weeks after Time 2. Children completed questionnaires in a group format at their school. Teachers completed questionnaire packets in their classroom and returned them to the graduate student research assistants. Directions and items were read out loud to the children. To maximize privacy, children were asked to keep answers private and to raise their hand if they had questions about a particular question. If children need words or phrases translated into Spanish, a trained bilingual graduate or undergraduate student did so.

Measures

All measures can be found in the Appendices.

Background/Demographic Information. Students were asked to indicate their age, sex, ethnicity, and languages spoken at home.

School Experiences Questionnaire (SEQ; Kochenderfer-Ladd, 2004). Children's self-report of peer victimization was assessed using a 9-item measure adapted from the SEQ. The SEQ assesses peer victimization across physical, verbal, and relational experiences. Items are rated on a five-point scale (0 = *Never*; 4 = *Always*). Scores on all items were averaged to form a global peer victimization score. The SEQ has demonstrated good internal consistency

(Cronbach's $\alpha = 0.89$; Kochenderfer-Ladd, 2004). In the present study, the SEQ demonstrated good internal consistency at Time 1 ($\alpha = 0.86$) and Time 3 ($\alpha = 0.89$). A parallel version of the SEQ consisting of three items assessing physical, verbal, and relational victimization was used by teachers to rate each student's levels of peer victimization. Internal consistency (Cronbach's $\alpha = 0.75$ - .77) for the teacher measure is adequate (Elledge, Cavell, Ogle, & Newgent, 2010). In the present study, the teacher version of the SEQ demonstrated good internal consistency at Time 1 ($\alpha = 0.86$) and Time 3 ($\alpha = 0.87$).

Revised Class Play (RCP; Masten, Morison, & Pellegrini, 1985). Peer-report of peer victimization was assessed using a modified version of the RCP. The RCP is a widely used sociometric procedure known for it's predictive validity (e.g., Gest, Sesma, Masten, & Tellegen, 2006). Researchers often rely on peer report measures (Ladd & Kochenderfer-Ladd, 2002; Perry, Kusel, & Perry, 1998), including the Revised Class Play instrument (e.g., Estell et al., 2009), when assessing the degree to which children are recurring victims of school bullying. Children were asked to be a "director of a play" and to nominate three classmates who best fit roles describing someone who is being bullied. Three separate items assessed verbal, physical, and relational victimization. Scores on all items were averaged to form a global peer victimization score. Peer nominations were standardized within classroom to control for the number of nominating peers.

Child Anxiety Sensitivity Index (CASI; Silverman, Flesig, Rabian, & Peterson, 1991). The CASI is a psychometrically sound 18-item self-report measure that assesses anxiety sensitivity in youth (ages 7 to 16). Sample items include "It scares me when my heart beats fast" and "It scares me when I have trouble getting my breath". Items are rated on a 0-2 point scale (0 = *None*, 1 = *Some*, 2 = *A lot*). Scores on all items were averaged to form a total anxiety sensitivity score.

Published test-retest reliability (r = 0.79) and internal consistency (Cronbach's α = 0.87) estimates of the CASI have been adequate (Silverman et al., 1991). Scores on the CASI have been shown to predict state anxiety (Rabian & Embry, 1999; Weems, Hammond-Laurence, Silverman, & Ginsburg, 1998.). In the present study, the CASI demonstrated good internal consistency at Time 1 (α = 0.88).

Emotional Avoidance (Fairholme et al. 2008). The Emotional Avoidance scale is a 20-item self-report measure adapted from the 33-item Emotional Avoidance Strategies Inventory (EASI-A). Fairholme and colleagues (2008) designed the Emotional Avoidance scale to assess the extent to which children avoid or suppress their feelings. Items are rated on a 0-4 point scale (0 = *Not at all true of me;* 4 = *Extremely true of me*). Scores on all items were averaged to form a total emotional avoidance score. Sample items include "I do whatever I can to avoid feeling sad or worried or afraid" and "I try not to seem sad even when I feel that way". In a recent study, the abbreviated version demonstrated excellent internal consistency (Cronbach's α = 0.93) and predicted anxiety and depressive disorders in children (Hernandez Rodriguez, Queen, Fairholme, Barlow, & Ehrenreich-May, 2012). In the present study, the Emotional Avoidance scale demonstrated excellent internal consistency at Time 1 (α = 0.92).

Revised Children Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moffit, Umemoto, & Francis, 2000). The RCADS is a 47-item self-report measure that assesses anxiety and depressive symptoms in youth. The RCADS contains six subscales derived from the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV-TR) criteria as well as a total internalizing score. Sample items include "I worry about things" and "I feel sad or empty". Items are rated on a 0-3 point scale (0 = *Never;* 3 = *Often*). Scores on all items were averaged to form a total internalizing score. Published test-retest reliability (r = .65 - .80) and

internal consistency (Cronbach's α = .70 - .79) estimates have been adequate with community samples (Chorpita et al., 2000). Scores on the RCADS have been shown to predict anxiety and depressive disorders (Chorpita, Moffitt, & Gray, 2005). For this study, an abbreviated 24-item was used by omitting the Obsessive-Compulsive Disorder and Posttraumatic Stress Disorder questions. Also, the RCADS scale demonstrated excellent internal consistency at Time 1 (α = 0.93).

Analyses

SPSS and AMOS were used for all analyses (Arbuckle, 2006; IBM Corp., 2013). Data were checked for normality, multivariate normality, linearity, and outliers. Outliers were recoded to reflect the next most extreme score. Eleven outliers from the Time 1 peer-reported peer victimization variable were found, and moved to the next extreme score. Three cases were also excluded from the present analyses because they violated multivariate normality assumptions. Internal consistency estimates, descriptive statistics, and intercorrelations (bivariate) were run for all variables. Primary analyses involved a series of separate path analysis for child-, teacher-, and peer-reports of peer-victimization. The decision to run separate analyses for each source of information about children's peer victimization is in keeping with research indicating scores from different informants tend to show modest overlap and reflect a distinct perspective (Kochenderfer-Ladd & Ladd, 2003).

To test whether anxiety sensitivity or avoidance and their interactions with peer victimization improve the prediction of future peer victimization, a hypothesized model was compared to a baseline model (see Figure 1). Next, a chi-square difference test was used to determine whether there was a significant difference between the two models' fit. To examine whether earlier peer victimization moderates the relation between anxiety sensitivity or avoidance and future peer victimization, interaction terms were examined. To interpret the

interaction between two continuous variables, simple slopes were computed for high (+1 *SD*), medium (0 *SD*), and low levels (-1 *SD*) of the moderator (Aiken & West, 1991).

Results

Descriptive Statistics

Means and standard deviations for all variables are shown in Table 1. Bivariate correlations are presented in Table 2. The results presented below are divided into four sections. The first section presents model fit for the hypothesized model across self-, peer-, and teacher-reports of peer victimization. The second section presents results about the specific path coefficients predicting Time 2 internalizing symptoms and Time 3 self-, peer-, and teacher-reports of peer victimization. The third section presents results for the multi-group moderation analyses across all reporters. The fourth section presents results for the chi-square difference test to compare the hypothesized and baseline models.

Model Fit: Hypothesized Model

To examine model fit of the hypothesized model, four indices were used: (1) chi-square test, (2) chi-square to degrees of freedom test, (3) comparative fit index (CFI), and (4) root mean squared error of approximation (RMSEA). A non-significant chi-square test and a value below 2 or 3 for the chi-square degrees of freedom test would suggest appropriate fit (Tabachnick & Fidell, 2001). A CFI above .95 and a RMSEA below .05 also suggest a good fit (Tabachnick & Fidell, 2001).

Self-Report. The macro-fit indices were mixed. Chi-square test, χ^2 (1) =3.41, p = .07 suggested a good fit of the model; however, the chi-square to degrees of freedom test suggest an ill fit χ^2/DF =3.41. The micro-fit goodness-of-fit indices suggested a good fit of the model, RMSEA = 0.06, CFI = 1.00. Given three out of the four fit indices suggested a good fit of the model, the model was deemed appropriate to analyze.

Peer-Report. Thre macro- and micro-fit indices suggested a good fit of the model. Chi-square test, χ^2 (1) = 0.09, p = .77, the chi-square to degrees of freedom test, χ^2/DF =0.09, and RMSEA = 0.00, CFI = 1.00, suggested a good fit of the model.

Teacher-Report. Similar to peer-reported peer victimization, the macro- and micro-fit indices suggested a good fit of the model. Chi-square test, χ^2 (1) = 0.42, p = .52 and chi-square to degrees of freedom test, χ^2/DF =0.42, suggested a good fit of the model. The micro-fit goodness-of-fit indices also suggested a good fit of the model, RMSEA = 0.00, CFI = 1.00.

Path Coefficients: Hypothesized Model

Because the hypothesized model demonstrated adequate fit, path coefficients were examined. Specifically, path coefficients involving anxiety sensitivity and emotional avoidance were examined to determine the degree to which these variables were prospectively associated with internalizing symptoms and peer victimization.

Self-Report. Standardized coefficients are presented in Figure 2. Overall, the hypothesized model predicted 37% of the variance in Time 3 self-reported peer victimization. Results revealed baseline levels of peer victimization, β = .44, p < .001, and Time 2 internalizing symptoms, β = .31, p < .001, significantly predicted Time 3 peer victimization. Anxiety sensitivity and emotional avoidance did not directly predict later peer victimization, but results did reveal a significant interaction between baseline levels of peer victimization and emotional avoidance predicted later peer victimization, β = -.10, p < .01. To interpret the interaction between peer victimization and emotional avoidance, simple slopes were computed for high (+1 *SD*), medium (0 *SD*), and low levels (-1 *SD*) of the moderator (Time 1 peer victimization). The relation between emotional avoidance and Time 3 peer victimization at differing levels of Time 1 peer victimization are depicted in Figure 4. For children with relatively high levels of baseline

peer victimization, the relation between emotional avoidance and Time 3 peer victimization was negative (β = -.11), indicating children with greater levels of emotional avoidance reported less peer victimization than those with lower levels of emotional avoidance. A different pattern was found for children with relatively low levels of baseline peer victimization. The relation between emotional avoidance and Time 3 peer victimization was positive (β = .07), indicating children with greater levels of emotional avoidance reported more peer victimization than those with lower levels of emotional avoidance.

In regards to Time 2 internalizing symptoms, the hypothesized model predicted 48% of the variance. Results revealed baseline levels of anxiety sensitivity, β = .16, $p < .001$, and baselines levels of internalizing symptoms, β = .56, $p < .001$, significantly predicted Time 2 internalizing symptoms.

Peer-Report. Standardized coefficients are presented in Figure 3. Overall, the hypothesized model predicted 44% of the variance in Time 3 peer-reported peer victimization. Results revealed baseline levels of peer victimization, β = .65, $p < .001$, and Time 2 internalizing symptoms, β = .09, $p < .001$, significantly predicted Time 3 peer victimization. Anxiety sensitivity, emotional avoidance, and the hypothesized interactions did not directly predict peer victimization.

In regards to Time 2 internalizing symptoms, the hypothesized model predicted 50% of the variance. Results revealed baseline levels of anxiety sensitivity, β = .16, $p < .001$, and baseline levels of internalizing symptoms, β = .58, $p < .001$, significantly predicted Time 2 internalizing symptoms. The interaction term between baseline levels of peer victimization and anxiety sensitivity predicted later peer victimization, β = -.07, $p < .05$. Differences in the relation between anxiety sensitivity and Time 2 internalizing symptoms are depicted in Figure 6. For

children with relatively high levels of baseline peer victimization, the relation between anxiety sensitivity and internalizing symptoms was negative (β = -.17), indicating children with lower levels of anxiety sensitivity reported more internalizing symptoms than those with greater levels of anxiety sensitivity. A different pattern was found for children with relatively low levels of baseline peer victimization. The relation between anxiety sensitivity and Time 2 internalizing symptoms was positive (β = .65), indicating children with greater levels of anxiety sensitivity reported more internalizing symptoms than those with lower levels of anxiety sensitivity. The figure also depicts children's level of Time 2 internalizing symptoms depended on whether they had low or high baseline peer victimization, but only for those children with low levels of anxiety sensitivity. For children with high levels of anxiety sensitivity, baseline peer victimization did not seem to moderate the relation between anxiety sensitivity and Time 2 internalizing symptoms.

Teacher-Report. Standardized coefficients are presented in Figure 4. Overall, the hypothesized model predicted 39% of the variance in Time 3 teacher-reported peer victimization. Results revealed baseline levels of peer victimization, β = .65, $p < .001$, significantly predicted Time 3 peer victimization. Anxiety sensitivity, emotional avoidance, and the hypothesized interactions did not directly predict later peer victimization. Internalizing symptoms also did not predict later peer victimization.

In regards to Time 2 internalizing symptoms, the hypothesized model predicted 50% of the variance. Results showed anxiety sensitivity, β = .15, $p < .001$, and baseline levels of teacher-reported peer victimization, β = .09, $p < .01$, significantly predicted Time 2 internalizing symptoms. Time 1 internalizing symptoms also significantly predicted Time 2 internalizing

symptoms, $\beta = .57$, $p < .001$. emotional avoidance and the hypothesized interactions did not predict later internalizing symptoms.

Chi-Square Difference Tests

Given the hypothesized model provided good fit to the data across all reports of peer victimization, a chi-square difference tests was run to test whether the hypothesized model fit the data better than the baseline model. The hypothesized and baseline models are depicted in Figure 1. Table 3 provides fit indices and chi-square difference tests across reports of peer victimization.

Self-report. For self-reported peer victimization, chi-square difference tests revealed a significant difference between the hypothesized model and the baseline model, $\chi^2 (8) = 23.53$, $p < .05$, indicating the hypothesized model fit the data better than the null model.

Peer-report. For peer-reported peer victimization, chi-square difference tests also revealed a significant difference between the baseline model and the hypothesized model, $\chi^2 (8) = 20.86$, $p < .05$. Once again, the hypothesized model fit the data better than the baseline model.

Teacher-report. For teacher-reported peer victimization, chi-square difference tests revealed a significant difference between the baseline model and the hypothesized model, $\chi^2 (8) = 20.44$, $p < .05$. As before, the hypothesized model was a better fit than the baseline model.

Discussion

In this study, anxiety sensitivity and emotional avoidance were tested as possible developmental vulnerabilities to internalizing symptoms and peer victimization. Results failed to support anxiety sensitivity or emotional avoidance as direct precursors to peer victimization; rather, anxiety sensitivity was significantly related to internalizing symptoms, which, in turn, were significantly related to later self- and peer-reported levels of peer victimization. Emotional avoidance was not directly related to internalizing symptoms or peer victimization. Results also

supported a child-by-environment model wherein baseline levels of self-reported peer victimization moderated the relation between emotional avoidance and later peer victimization, but in ways that were unexpected. Emotional avoidance was negatively related to peer victimization, but only with children who had relatively high levels of baseline peer victimization. With children who had relatively low levels of baseline peer victimization, emotional avoidance was positively related to later peer victimization.

Contrary to my primary hypothesis, results did not indicate that anxiety sensitivity or emotional avoidance increased a child's risk of future peer victimization. Rather, tests of hypothesized models revealed that anxiety sensitivity and emotional avoidance were related solely to children's internalizing symptoms. In turn, internalizing symptoms were related to peer victimization, as found in previous studies (Due et al., 2005; Kumpulainen, Rasanen, & Puura, 2001). One possible reason why anxiety sensitivity and emotional avoidance were not related to peer victimization is the subtle nature of these constructs. Anxiety sensitivity and emotional avoidance are characterized as internal states; both constructs rely heavily on the experience of the individual. Therefore both constructs may not manifest itself to peers and thus the likelihood that the constructs can be used to devalue a child's role in the peer hierarchy or tease a child diminishes. In contrast, internalizing symptoms have been long noted to be associated with peer victimization (Hawker & Boulton, 2000; Reijntjes et al., 2010). This might be because children who demonstrate internalizing behaviors, like crying, have difficulty regulating their emotional distress in socially provocative situations (Rosen, Milich, & Harris, 2012). The inability to regulate emotional distress in a social context has been shown to put children at risk for rejection and peer victimization (Hanish et al. 2004). This display of distress yoked with submissive behavior may also indirectly reinforce a bully to continue victimizing a child (Schwartz, Dodge,

& Coie, 1993; Wilton, Craig, & Pepler, 2000). Wilton and colleagues (2000) have found that children who continuously display emotional distress in socially provocative situations increase their likelihood of future victimization compared to children who can regulate their distress. It may be that anxiety sensitivity or emotional avoidance is not salient or potent enough to begin this learning history.

Though anxiety sensitivity and emotional avoidance were not directly related to reports of peer victimization, some support was found for a child-by-environment model. In particular, children who reported high levels of baseline peer victimization differed from children who reported low levels in the association between emotional avoidance and Time 3 peer victimization. For children who reported high levels of baseline peer victimization, emotional avoidance was negatively related to peer victimization at Time 3. The opposite was found for children who reported low levels of peer victimization indicating the greater the level of emotional avoidance, the more reported peer victimization. This was an unexpected finding given I hypothesized children who reported higher levels of baseline peer victimization and higher levels of emotional avoidance would report more peer victimization compared to children who had lower levels of baseline levels of peer victimization. One possible explanation for this unanticipated finding is that children who experienced high levels of prior peer victimization may engage in emotional avoidance because they believe emotionally distancing themselves will help in being victimized less in the future. Interestingly, because this finding was found in the self-report model only, it is possible that children who engage in higher levels of emotional avoidance are also more likely to downplay their self-perceived levels of peer victimization. Studies have shown that children use different coping strategies to alter future levels of peer victimization (Kochenderfer-Ladd & Skinner, 2002). In fact, Kochenderfer-Ladd and Skinner

found that approach-related (vs. avoidant-related) strategies were only beneficial for nonvictimized children; for victimized children, approach-related strategies exacerbated intrapersonal maladjustment (e.g., low peer preference). Moreover, avoidant-related strategies were not related to intrapersonal maladjustment for nonvictimized children but for victimized children, avoidant-related strategies predicted an increased risk of maladjustment (e.g., low peer preference for boys and social problems for girls). Results from my study do not align with these findings, which could be due to differences in the measurement of avoidance-related coping across the two studies. More research is needed to disentangle these relations but to my knowledge no other studies have directly examined the association between emotional avoidance and peer victimization. Thus, it is unclear how to fully interpret the failure to find an association.

Results lend some support to a child-by-environment model, though it was only found with self-reported peer victimization and emotional avoidance. It is possible the strength of the stressful event (i.e., prior peer victimization experience) was too weak or too transitory to predict future peer victimization. In exploring the mean level of baseline peer victimization across all reporters (see Table 1), the mean value appeared relatively low compared to the range of possible scores. Perhaps the relation between anxiety sensitivity or emotional avoidance and later peer victimization is evident only when the stress of children's earlier peer victimization experiences are more stressful or more persistent. Previous peer victimization studies have shown that associations sometimes differ between non-victims and victims (e.g., Kochender-Ladd & Skinner, 2002). Because discrepancies have been noted, future studies should examine whether anxiety sensitivity or emotional avoidance are related to peer victimization in stable victims. Previous studies have found stable victims are at more risk than children who are inconsistently victimized (Cillessen & Lansu, 2014; Hanish & Guerra, 2002; Juvonen, Nishina, & Grahaam,

2000; Menesini, Modena, & Tani, 2009). For instance, Cillessen and Lansu (2014) found that stably victimized youth had higher levels of externalizing and internalizing behaviors, and lower levels of peer sociability than non-stable victimized youth. In fact, these differences were pronounced in grades 4-8 and then declined past grade 8. Menesini and colleagues (2009) also found stable victims reported higher levels of anxiety and depression than victims who were first victimized in adolescence.

Anxiety sensitivity and similar constructs have been found to interact with interpersonal adversity to predict future internalizing symptoms (Gazelle & Ladd, 2003) and peer victimization is but one type of stressor that might activate anxiety sensitivity or emotional avoidance. For example, Gazelle and colleagues (2003) found the interaction between anxious solitude (child) and peer exclusion (environment) predicted depressive symptom trajectories from kindergarten to fourth grade. Thus, it might be beneficial to explore whether anxiety sensitivity or emotional avoidance interacts with other social or environmental stressors such as peer rejection or the lack of a best friend. Peer rejection has been shown to amplify the risk of chronic peer victimization (Coie & Dodge, 1998; Coie, Terry, Lenox, Lochman, & Hyman, 1995; Hanish & Guerra, 2000; Ladd & Troop-Gordon, 2003), which, in turn, can increase the likelihood of future peer rejection. Peer rejection is typically operationalized as the degree to which a child is actively disliked by peers, which could interact with anxiety sensitivity or emotional avoidance to yield higher levels of peer victimization.

Limitations and Future Directions

There were several limitations to this study. First, this study used short-term longitudinal data. Thus, the age range of the sample was limited. Future research exploring anxiety sensitivity, emotional avoidance, peer victimization, and internalizing symptoms would benefit by expanding the age range. One reason expanding the age range would be beneficial is because

change in interest variables can be explored throughout developmental and transitional periods. For example, it could be that young children who experience anxiety sensitivity do not have the cognitive resources to attribute their somatic symptoms to peer victimization. Expanding the age range can also help determine temporal ordering of variables. In this study anxiety sensitivity and emotional avoidance were assumed to emerge prior to internalizing symptoms and peer victimization. Though anxiety sensitivity and emotional avoidance are operationalized as vulnerabilities to later difficulties, this may not be the case.

Second, generalizability of findings are limited because the emotional avoidance measure used in this study was newly created. The emotional avoidance measure was originally created by combining two emotional and behavioral measures and then validated with a clinical adolescent sample (ages 12-17). Though the emotional avoidance measure demonstrated excellent internal consistency ($\alpha = 0.92$) in this study, it lacked additional psychometric testing. This may be why emotional avoidance was modestly related to internalizing symptoms and unrelated to peer victimization. Future studies should explore the psychometric properties of this measure with children and adolescents.

Third, this study examined how anxiety sensitivity and emotional avoidance was related to global levels of peer victimization (i.e., exploring combined scores of physical, relational, and verbal victimization) and global levels of internalizing symptoms. Not examined was the subtypes of anxiety sensitivity, the subtypes of peer victimization, or the unique role of anxiety or depressive symptoms. Certain subtypes of anxiety sensitivity may be more related to peer victimization than other subtypes. For instance, it could be that the social concerns sub-factor of anxiety sensitivity is more related to peer-reported peer victimization than the cognitive sub-factor because it taps into social appearance.

Fourth, this study postulated anxiety sensitivity and avoidance were activated by a stressful event. The selected stressful event was prior peer victimization experience. A limitation with the selected methodology was it was unclear whether children already had a stressful event that activated the high levels of anxiety sensitivity of avoidance. Moreover, it is unclear whether this event was prior peer victimization. It could be that other types of stressful events can activate these propensities. Future studies could explore whether children before they are chronically bullied to determine whether anxiety sensitivity or avoidance came first.

Conclusion

This study was one of the first to test empirically the role of anxiety sensitivity and emotional avoidance in the association between internalizing symptoms and peer victimization. Because peer victimization is linked with future difficulties, it is important to research malleable risk factors with the hope those risk factors can be targeted early on in prevention programs. In order to further this research multi-method longitudinal studies are needed that explore the interplay between posited risk factors and peer victimization and their interaction within children's social context. We know peer victimization is associated with maladjustment and that they are myriad risk factors; however, there is still much to learn about how to alter the risk trajectory of stably bullied children. Needed is more information about what risk and protective factors can be changed successfully to aid in curbing future peer victimization and maladjustment. Being able to answer these questions can help us disentangle the complexity to pathways towards peer victimization.

References

Arbuckle, J. L. (2006). Amos (Version 7.0) [Computer Program]. Chicago: SPSS.

Bellmore, A. D., Witkow, M. R., Graham, S., & Juvonen, J. (2004). Beyond the individual: the impact of ethnic context and classroom behavioral norms on victims' adjustment. *Developmental Psychology*, *40*, 1159-1172. doi:10.1037/0012-1649.40.6.1159

Bond, L., Carlin, J. B., Thomas, L., Rubin, K., & Patton, G. (2001). Does bullying cause emotional problems? A prospective study of young teenagers. *British Medical Journal, 323,* 480-484.

Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: a sequential model. *Developmental psychology*, *33*(1), 135-145.

Calkins, S., & Hill, A. (2007). Caregiver influences on emerging emotion regulation. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (pp. 229-248). New York, NY: Guilford Press.

Cambell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Effects of suppression and acceptance on emotional responses of individuals with anxiety and mood disorders. *Behaviour Research and Therapy, 44*, 1251-1263. doi:10.1016/j.brat.2005.10.001

Carbone-Lopez, K., Esbensen, F. A., & Brick, B. T. (2010). Correlates and consequences of peer victimization: Gender differences in direct and indirect forms of bullying. *Youth Violence and Juvenile Justice*, *8*, 332-350. doi:10.1177/1541204010362954

Card, N. A., Isaacs, J., & Hodges, E. V. E. (2007). Aggression and victimization in children's peer groups: A relationship perspective. In A. L. Vangelisti (Ed.), *Feeling hurt in close relationships* (pp. 235-259). Cambridge, UK: Cambridge University Press.

Chorpita, B. F., Moffitt, C. E., & Gray, J. (2005). Psychometric properties of the Revised Child Anxiety and Depression Scale in a clinical sample. *Behaviour Research and Therapy*, *43*, 309-322. doi:10.1016/j.brat.2004.02.004

Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy*, *38*, 835-855. doi:10.1016/S0005-7967(99)00130-8

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: a multiinformant approach. *Journal of Consulting and Clinical Psychology*, *66*, 337-347. doi:10.1037/0022-006X.66.2.337

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology, 8*, 367-380. doi:10.1017/S0954579400007148

Crick, N. R., & Nelson, D. A. (2002). Relational and physical victimization within friendships: Nobody told me there'd be friends like these. *Journal of Abnormal Child Psychology*, *30*, 599-607. doi:10.1023/A:1020811714064

Donnell, C. D., & McNally, R. J. (1989). Anxiety sensitivity and history of panic as predictors of response to hyperventilation. *Behaviour Research and Therapy*, *27*(4), 325-332.

Due, P., Holstein, B. E., Lynch, J., Diderichsen, F., Gabhain, S. N., Scheidt, P., & Currie, C. (2005). Bullying and symptoms among school-aged children: International comparative cross sectional study in 28 countries. *The European Journal of Public Health*, *15*, 128-132.

Egan, L. A., & Todorov, N. (2009). Forgiveness as a coping strategy to allow school students to deal with the effects of being bullied: theoretical and empirical discussion. *Journal of Social and Clinical Psychology*, *28*, 198-222. doi:10.1521/jscp.2009.28.2.198

Eifert, G. H., & Forsyth, J. P. (2005). *Acceptance and Commitment Therapy for Anxiety Disorders: A Practitioner's Treatment Guide to Using Mindfulness, Acceptance, and Values-Based Behavior Change*. New Harbinger Publications.

Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments, & Computers, 28*, 1-11.

Feldner, M. T., Zvolensky, M. J., Eifert, G. H., & Spira, A. P. (2003). Emotional avoidance: An experimental test of individual differences and response suppression using biological challenge. *Behaviour research and therapy*, *41*, 403-411. doi:10.1016/S0005-7967(02)00020-7

Forsyth, J. P., Eifert, G. H., & Barrios, V. (2006). Fear conditioning in an emotion regulation context: A fresh perspective on the origins of anxiety disorders. In M. G. Craske, D. Herman, D. Vansteenwegen (Eds.), *From basic processes to clinical implications* (pp. 133-153). Washington DC, US: American Psychological Association.

Graham, S. (2006). Peer victimization in school: Exploring the ethnic context. *Current Directions in Psychological Science*, *15*, 317-321. doi:10.1111/j.1467-8721.2006.00460.x

Graham, S., Bellmore, A., Nishina, A., & Juvonen, J. (2009). "It must be me": Ethnic diversity and attributions for peer victimization in middle school. *Journal of Youth and Adolescence*, *38*, 487-499. doi:10.1007/s10964-008-9386-4

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*, 348-362. doi:10.1037/0022-3514.85.2.348

Gross, J. J., & Levenson, R. W. (1997). Hiding feelings: the acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology*, *106*, 95-103. doi:10.1037/0021-843X.106.1.95

Hanish, L. D., & Guerra, N. G. (2000). The roles of ethnicity and school context in predicting children's victimization by peers. *American Journal of Community Psychology, 28*, 201-223. doi:0091-0562/00/0400-0201

Harvey, A., Watkins, E., Mansell, W., & Shafran, R. (2004). *Cognitive behavioural processes across psychological disorders: A transdiagnostic approach to research and treatment.* New York: Oxford University Press.

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology & Psychiatry, 41*, 441-455. doi:10.1111/1469-7610.00629

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D., …McCurry, S. M. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record, 54*, 553-578.

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*, 1152.

Hernandez Rodriguez, J., Queen, A. H., Fairholme, C. P., Barlow, D. H., & Ehrenreich-May, J. (2012, July). Initial validation of a combined behavioral and emotional avoidance scale in a clinical sample of adolescents with anxiety and depressive disorders. Talk presented at the 9th Annual Quantitative Training for Underrepresented Groups, Orlando, Florida.

Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 76*, 677-685.

Hodges, E. V., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology*, *33*, 1032-1039.

Holloway, W., & McNally, R. J. (1987). Effects of anxiety sensitivity on the response to hyperventilation. *Journal of Abnormal Psychology*, *96*(4), 330.

Hunter, S. C., & Boyle, J. M. (2004). Appraisal and coping strategy use in victims of school bullying. *British Journal of Educational Psychology*, *74*, 83-107. doi:10.1348/000709904322848833

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, *72*, 1301-1334. doi:10.1111/j.1467-6494.2004.00298.x

Ledwell, M., & King, V. (2013). Bullying and internalizing problems gender differences and the buffering role of parental communication. *Journal of Family Issues*. Advance online publication. doi:10.1177/0192513X13491410

Kaltiala-Heino, R., Rimpelä, M., Rantanen, P., & Rimpelä, A. (2000). Bullying at school an indicator of adolescents at risk for mental disorders. *Journal of Adolescence*, *23*, 661-674.

Karekla, M., Forsyth, J. P., & Kelly, M. M. (2004). Emotional avoidance and panicogenic responding to a biological challenge procedure. *Behavior Therapy*, *35*, 725-746. doi:10.1016/S0005-7894(04)80017-0

Kearney, C., Albano, A., Eisen, A., Allan, W., & Barlow, D. H. (1997). The phenomenology of panic disorder in youngsters: An empirical study of a clinical sample. *Journal of Anxiety Disorders, 11,* 49–62.

Kochenderfer-Ladd, B. (2004). Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development, 13*, 329-349. doi:10.1111/j.1467-9507.2004.00271.x

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development, 67*, 1305-1317.

Kochenderfer, B. J., & Ladd, G. W. (1997). Victimized children's responses to peers' aggression: Behaviors associated with reduced versus continued victimization. *Development and Psychopathology, 9*, 59-73.

Kochenderfer-Ladd, B., & Skinner, K. (2002). Children's coping strategies: Moderators of the effects of peer victimization? *Developmental Psychology, 38*, 267-268. doi:10.1037/0012-1649.38.2.267

Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior*, *27*, 102-110.

Manassis, K., & Bradley, S. J. (1994). The development of childhood anxiety disorders: Toward an integrated model. *Journal of Applied Developmental Psychology*, *15*, 345-366. doi:10.1016/0193-3973(94)90037-X

Masten, A. S., Morison, P., & Pellegrini, D. S. (1985). A Revised Class Play method of peer assessment. *Developmental Psychology, 21*, 523-533.

McLaughlin, K. A., Hatzenbuehler, M. L., & Hilt, L. M. (2009). Emotion dysregulation as a mechanism linking peer victimization to internalizing symptoms in adolescents. *Journal of Consulting and Clinical Psychology*, *77*, 894-904. doi:10.1037/a0015760

Menesini, E., Modena, M., & Tani, F. (2009). Bullying and victimization in adolescence: Concurrent and stable roles and psychological health symptoms. *The Journal of Genetic Psychology, 170*, 115-133.

Nansel, T.R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Aggression behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*, 2094-2100. doi:10.1001/jama.285.16.2094

Olweus, D. (1993). *Bullying at school: What we know and what we can do.* Oxford, UK: Blackwell.

Olweus, D. & Limber, S. P. (2010). Bullying in school: Evaluation and dissemination of the Olweus Bullying Prevention Program. *American Journal of Orthopsychiatry, 80*, 124-134. doi:10.1111/j.1939-0025.2010.01015.x

Pastrana, F. A., Craig, J. T., Hernandez Rodriguez, J., Elledge, L. C., Faith, M. A., & Cavell, T. A. (2012, November). *Anxiety sensitivity and peer victimization*. Poster presented at the 46th Annual Association for Behavioral and Cognitive Therapies, National Harbor, Maryland.

Perry, D. G., Hodges, E. V., & Egan, S. K. (2001). Determinants of chronic victimization by peers: A review and a new model of family influence. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (73-104). New York: Guilford Press.

Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology*, *24*, 807-814. doi:10.1037/0012-1649.24.6.807

Perry, D. C., Williard, J. C., & Perry, L. C. (1990). Peers' perceptions of the consequences that victimized children provide aggressors. *Child Development*, *61*, 1310-1325.

Rabian, B., Peterson, R. A., Richters, J., & Jensen, P. S. (1993). Anxiety sensitivity among anxious children. *Journal of Clinical Child Psychology, 22*, 441-446. doi:10.1207/s15374424jccp2204_4

Reijntjes, A., Kamphuis, J. H., Prinzie, P., Boelen, P. A., van der Schoot, M., & Telch, M. J. (2011). Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior, 37*, 215-222. doi:10.1002/ab.20374

Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer-victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect, 34*, 244-252. doi:10.1016/j.chiabu.2009.07.009

Reiss, S. (1991). Expectancy model of fear, anxiety, and panic. *Clinical Psychology Review*, *11*, 141-153.

Reiss, S., & McNally, R. J. (1985). Expectancy model of fear. In S. Reiss, & R. R. Bootzin (Eds.), *Theoretical issues in behavior therapy* (107–121). San Diego: Academic Press.

Reyes, A. D. L. & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131*, 483-509. doi:10.1037/0033-2909.131.4.483

Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology*, *79*, 410-424. doi:10.1037/0022-3514.79.3.410

Rigby, K., & Slee, P. (1999). Suicidal ideation among adolescent school children, involvement in bully-victim problems, and perceived social support. *Suicide and life-threatening behavior*, *29*, 119-130.

Roecker Phelps, C. E. (2001). Children's responses to overt and relational aggression. *Journal of Clinical Child Psychology*, *30*, 240-252. doi:10.1207/S15374424JCCP3002_11

Rosen, P. J., Milich, R., & Harris, M. J. (2012). Dysregulated Negative Emotional Reactivity as a Predictor of Chronic Peer Victimization in Childhood. *Aggressive Behavior*, *38*, 414-427. doi:10.1002/ab.21434

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist*, *41*, 813. doi:10.1037/0003-066X.41.7.813

Roth, D. A., Coles, M. E., & Heimberg, R. G. (2002). The relationship between memories for childhood teasing and anxiety and depression in adulthood. *Journal of Anxiety Disorders*, *16*, 149-164.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*, 112-120. doi:10.1016/j.avb.2009.08.007

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive behavior*, *22*, 1-15.

Schuster, M. A., Elliott, M., Kanouse, D. E., Wallander, J. L., Tortolero, S. R., Ratner, J. A.,…Banspach, S. W. (2012). Racial and ethnic health disparities among fifth-graders in three cities. *The New England Journal of Medicine, 367*, 735-745. doi:0.1056/NEJMsa1114353

Schwartz, D., Dodge, K. A., & Coie, J. D. (1993). The emergence of chronic peer victimization in boys' play groups. *Child Development, 64*, 1755-1772.

Schwartz, D., Dodge, K. A., Coie, J. D., Hubbard, J. A., Cillessen, A. H., Lemerise, E. A., & Bateman, H. (1998). Social-cognitive and behavioral correlates of aggression and victimization in boys' play groups. *Journal of Abnormal Child Psychology*, *26*, 431-440. doi:10.1023/A:1022695601088

Seals, D., & Young, J. (2003). Bullying and victimization: prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Adolescence*, *38*, 735-747.

Silverman, W. K., Flesig, W., Rabian, B., & Peterson, R. A. (1991). Childhood Anxiety Sensitivity Index. *Journal of Clinical Child Psychology, 20*, 162-168.

Smith, P. K., & Shu, S. (2000). What Good Schools can Do About Bullying Findings from a Survey in English Schools After a Decade of Research and Action. *Childhood*, *7*, 193-212.

Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical psychology review*, *22*(2), 189-222. doi:10.1016/S0272-7358(01)00087-3

Stein, M. B., Jang, K. L., & Livesley, W. J. (1999). Heritability of anxiety sensitivity: A twin study. *American Journal of Psychiatry*, *156*(2), 246-251.

Stewart, S. H., Taylor, S., Jang, K. L., Cox, B. J., Watt, M. C., Fedoroff, I. C., & Borger, S. C. (2001). Causal modeling of relations among learning history, anxiety sensitivity, and panic attacks. *Behaviour Research and Therapy, 39,* 443–456.

Storch, E. A., Nock, M. K., Masia-Warner, C., & Barlas, M. E. (2003). Peer victimization and social-psychological adjustment in Hispanic and African-American children. *Journal of Child and Family Studies*, *12*, 439-452. doi:10.1023/A:1026016124091

Suveg, C., Southam-Gerow, M. A., Goodman, K. L., & Kendall, P. C. (2007). The role of emotion theory and research in child therapy development. *Clinical Psychology: Science and Practice*, *14*, 358-371. doi:10.1111/j.1468-2850.2007.00096.x

Suveg, C., & Zeman, J. (2004). Emotion regulation in children with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology*, *33*, 750-759. doi:10.1207/s15374424jccp3304_10

Vervoort, M. H., Scholte, R. H., & Overbeek, G. (2010). Bullying and victimization among adolescents: the role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence*, *39*, 1-11. doi:10.1007/s10964-008-9355-y

Visconti, K. J., Sechler, C. M., & Kochenderfer-Ladd, B. (2013). Coping with peer victimization: The role of children's attributions. *School Psychology Quarterly*, *28*, 122-140. doi:10.1037/spq0000014

Weems, C., Hammond-Laurence, K., Silverman, W., & Ferguson, C. (1997). The relation between anxiety sensitivity and depression in children and adolescents referred for anxiety. *Behaviour Research and Therapy, 35,* 961–966.

Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W. C., & Chu, B. C. (2003). Parenting and childhood anxiety: Theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry*, *44*, 134-151. doi:10.1111/1469-7610.00106

Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational research*, *35*, 3-25.

Zwierzynska, K., Wolke, D., & Lereya, T. S. (2013). Peer victimization in childhood and internalizing problems in adolescence: A prospective longitudinal study. *Journal of Abnormal Child Psychology, 41*, 309-323. doi:10.1007/s10802-012-9678-8

Table 1

Means and Standard Deviations for Participants (N = 663)

Variable	Mean	SD
T1 Anxiety Sensitivity	0.66	0.41
T1 Avoidance	1.84	0.93
T1 Internalizing Symptoms	0.96	0.58
T1 Peer Victimization – Self-report	0.84	0.75
T1 Peer Victimization – Peer-report	0.17	0.10
T1 Peer Victimization – Teacher-report	0.69	0.65
T2 Internalizing Symptoms	0.98	0.62
T3 Peer Victimization – Self-report	0.95	0.80
T3 Peer Victimization – Peer-report	0.16	0.13
T3 Peer Victimization – Teacher-report	0.88	0.65

Note. T^{number} = Time.

Table 2

Correlations Among Predictor and Outcome Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. T1 Anxiety Sensitivity									
2. T1 Avoidance	.52***								
3. T1 Internalizing Symptoms	.72**	.48***							
4. T1 Peer Victimization – Self-report	.38**	.22***	.56***						
5. T1 Peer Victimization – Peer-report	.03	-.01	.09*	.18***					
6. T1 Peer Victimization – Teacher-report	.09*	-.07	.16***	.24***	.30***				
7. T2 Internalizing Symptoms	.58***	.37***	.69***	.40***	.07	.16***			
8. T3 Peer Victimization – Self-report	.30***	.18***	.39***	.54***	.11***	.21***	.46***		
9. T3 Peer Victimization – Peer-report	.08*	.04	.13***	.22***	.66***	.29***	.14***	.21***	
10. T3 Peer Victimization – Teacher-report	.11***	.01	.13**	.20***	.25***	.62***	.15***	.21***	.38***

Note. *$p < .05$, **$p < .01$, ***$p < .001$. T^{number} = Time.

Table 3

Fit Indices and Chi-square Difference Tests Across Reporters

Model	χ^2	df	CFI	RMSEA	χ^2 Diff
Self-report					23.53*
Baseline	26.94	9	0.99	0.05	
Hypothesized	3.41	1	1.00	0.06	
Peer-report					20.86*
Baseline	20.95	9	0.99	.05	
Hypothesized	0.09	1	1.00	0.00	
Teacher-report					20.44*
Baseline	20.86	9	0.99	0.04	
Hypothesized	0.42	1	1.00	0.00	

Note. *$p < .05$.

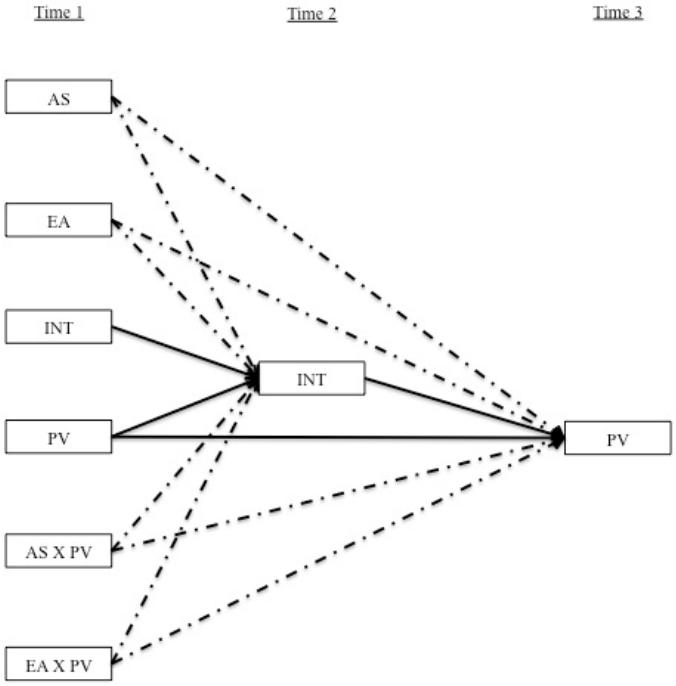

Figure 1. Hypothesized and baseline models. The hypothesized model includes solid and dotted paths. The baseline model includes only the solid paths. Multi-group analyses were also performed on each Time point. AS = Anxiety Sensitivity; EA = Emotional Avoidance; INT = Internalizing Symptoms; PV = Peer Victimization.

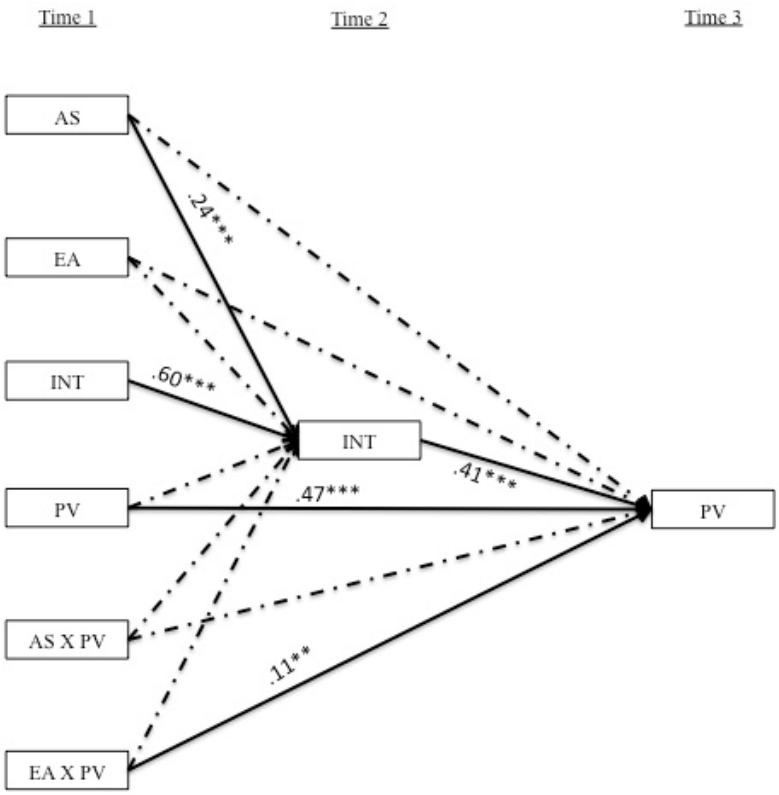

Figure 2. Self-report model. All reported path coefficients are standardized. Solid lines represent statistically significant path coefficients, and dashed lines are paths that were expected to be significant but were not. AS = Anxiety Sensitivity; EA = Emotional Avoidance; INT = Internalizing Symptoms; PV = Peer Victimization. *$p < .05$, **$p < .01$, ***$p < .001$.

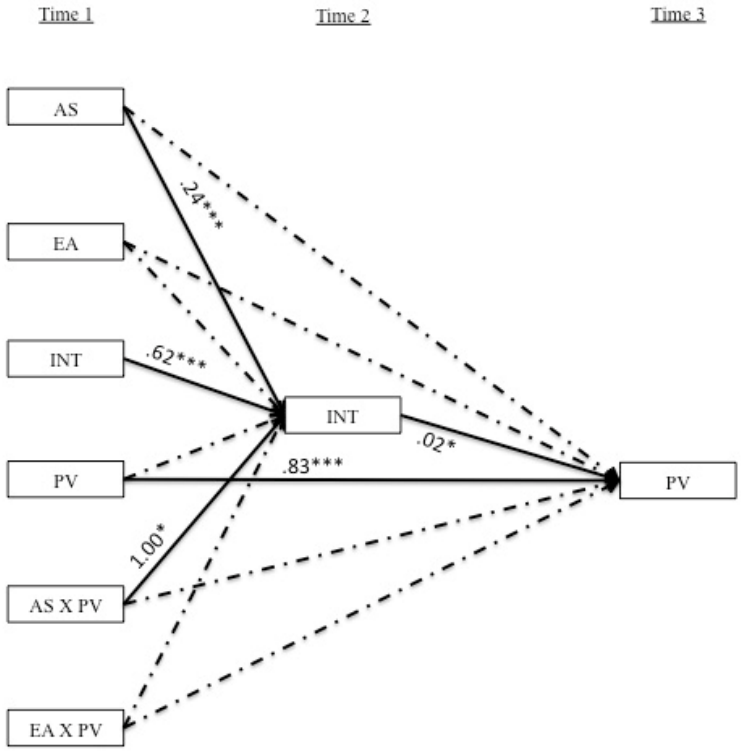

Figure 3. Peer-report model. All reported path coefficients are standardized. Solid lines represent statistically significant path coefficients, and dashed lines are paths that were expected to be significant but were not. AS = Anxiety Sensitivity; EA = Emotional Avoidance; INT = Internalizing Symptoms; PV = Peer Victimization. *$p < .05$, **$p < .01$, ***$p < .001$.

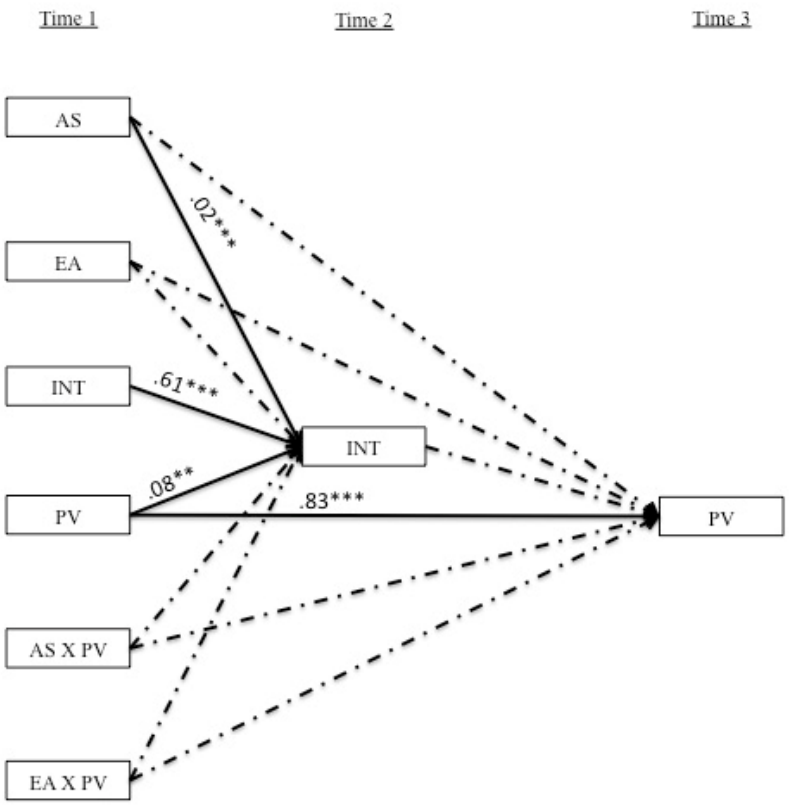

Figure 4. Teacher-report model. All reported path coefficients are standardized. Solid lines represent statistically significant path coefficients, and dashed lines are paths that were expected to be significant but were not. AS = Anxiety Sensitivity; EA = Emotional Avoidance; INT = Internalizing Symptoms; PV = Peer Victimization. *$p < .05$, **$p < .01$, ***$p < .001$.

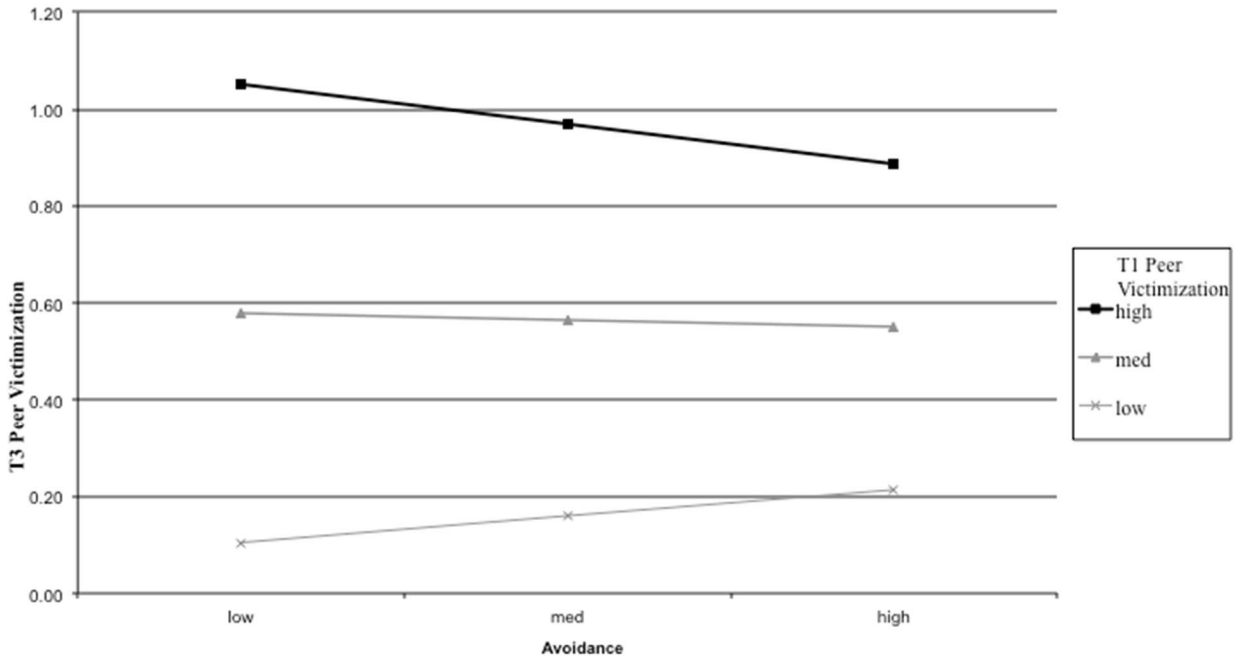

Figure 5. Simple slopes of the interaction between avoidance and T1 self-reported peer victimization on T3 peer victimization.

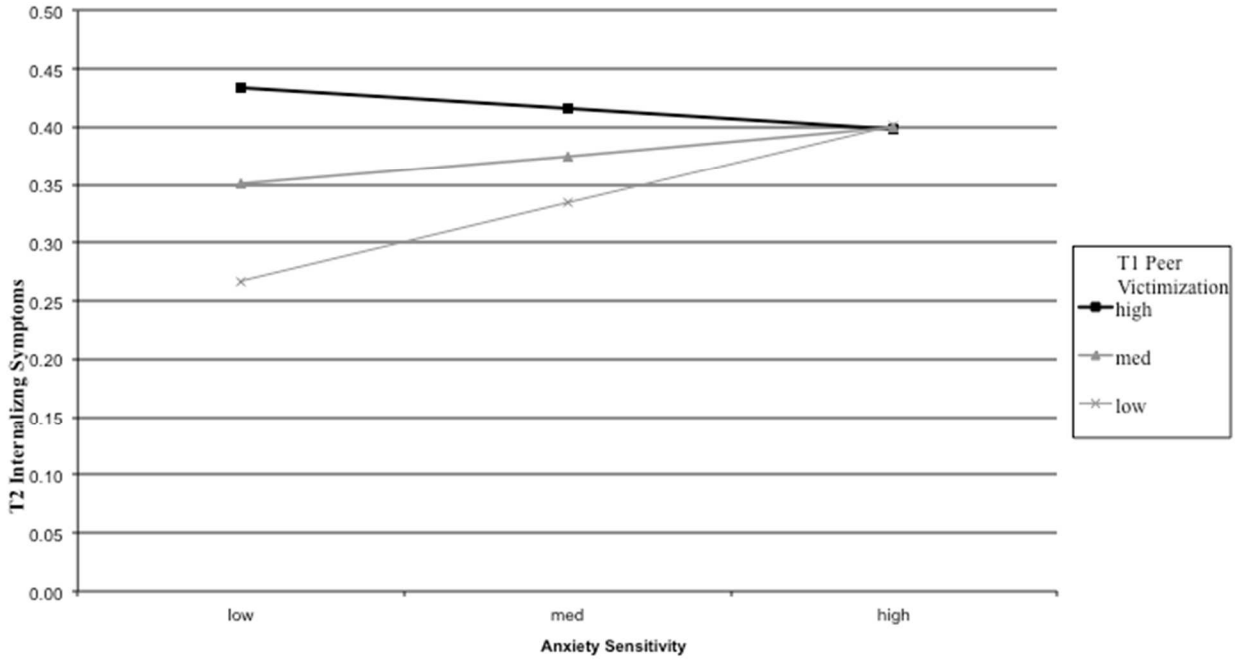

Figure 6. Simple slopes of the interaction between anxiety sensitivity and T1 peer-reported peer victimization on T3 internalizing symptoms.

Appendices

Appendix A – Demographics

SCHOOL #: _____ TODAY'S DATE: _____
TEACHER #: _____ YOUR GRADE: _____
STUDY ID #: _____ YOUR AGE: _____

Are you a boy or a girl?

- ☐ BOY
- ☐ GIRL

What languages are spoken in your home?

- ☐ ENGLISH
- ☐ SPANISH
- ☐ MARSHALLESE
- ☐ OTHER:_____

What is your race or culture?

- ☐ WHITE
- ☐ BLACK
- ☐ HISPANIC/LATINO
- ☐ ASIAN
- ☐ AMERICAN INDIAN
- ☐ PACIFIC ISLANDER
- ☐ BI/MULTI-RACIAL

Appendix B – Self-rated Peer Victimization

The Way Kids Are

Some questions ask about the kids in your class. Other questions ask about you.

A. How much do kids in your class call you mean names?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
B. How much do kids in your class hit you?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
C. How much do kids in your class like each other as friends?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
D. How much do kids in your class say hurtful things to you?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
E. How much do YOU tease other kids, or call them mean names, or say hurtful things to them?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
F. How much do kids in your class say mean things about you or tells lies about you to other kids?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
G. How much do kids in your class kick you?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
H. How much do kids in your class try to help if you are being picked on by other kids?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
I. How much do kids in your class tell you that you CAN'T play with them?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)

J. How much do YOU tell other kids they can't play with you, or YOU don't invite them to things to get back at them, or YOU say mean things or tell lies about them to other kids?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
K. How much do kids in your class get along with each other?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
L. How much do kids in your class tease you at school?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
M. How much do kids in your class NOT invite you to things to get back at you for something?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
N. How much do kids in your class push you?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
O. How much do YOU hit, or push, or kick other kids in your class?				
0 (Never)	1	2 (Sometimes)	3	4 (Always)
P. In my class, EVERYBODY is my friend.				
0 (Never)	1	2 (Sometimes)	3	4 (Always)

Appendix C – Peer-rated Peer Victimization

Pretend that you're directing a class play. Your job is to decide who will play the different parts in the play. Read the descriptions of the different kinds of parts, and circle the numbers for the 3 students who could play that part best. Remember, you're the director so you cannot pick yourself for any part. There is no right or wrong answer. Please keep your answers private.

A. Which 3 kids could play the part of someone who gets along well with the teacher, who likes to talk to the teacher, and who the teacher enjoys spending time with? Circle 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

B. Which 3 kids could play the part of someone who gets teased, who gets called mean names, or who gets told hurtful things by other kids? Circle 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

C. Which 3 kids could play the part of someone who gets pushed, who gets hit, or who gets kicked by other kids? Circle 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

D. Which 3 kids could play the part of someone who is told they can't play, who has mean things or lies said about them, or who aren't invited to things just to get back at them? Circle 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

E. Which 3 kids could play the part of someone who hits other kids, who teases other kids, or who tells other kids they can't play with them? Circle 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

The next questions are about the kids you play with in this class.

F. Who are the kids that you play with the most? Circle at least 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

G. Who are the kids that you play with the least? Circle at least 3 different numbers.

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

Appendix D – Self-rated Anxiety Sensitivity
CASI

Directions: A number of statements which boys and girls use to describe themselves are given below. Read each statement carefully and circle the words that describe you. There are no right or wrong answers. Remember, find the words that best describe you.

1. I don't want other people to know when I'm afraid.	None	Some	A lot
2. When I cannot keep my mind on my schoolwork I worry that I might be going crazy.	None	Some	A lot
3. It scares me when I feel 'shaky'.	None	Some	A lot
4. It scares me when I feel like I am going to faint.	None	Some	A lot
5. It is important for me to stay in control of my feelings.	None	Some	A lot
6. It scares me when my heart beats fast.	None	Some	A lot
7. It embarrasses me when my stomach growls (makes noise).	None	Some	A lot
8. It scares me when I feel like I am going to throw up.	None	Some	A lot
9. When I notice that my heart is beating fast, I worry that there might be something wrong with me.	None	Some	A lot
10. It scares me when I have trouble getting my breath.	None	Some	A lot
11. When my stomach hurts, I worry that I might be really sick.	None	Some	A lot
12. It scares me when I can't keep my mind on my schoolwork	None	Some	A lot

13. Other kids can tell when I feel shaky.	None	Some	A lot
14. Unusual feelings in my body scare me.	None	Some	A lot
15. When I am afraid, I worry that I might be crazy.	None	Some	A lot
16. It scares me when I feel nervous.	None	Some	A lot
17. I don't like to let my feelings show.	None	Some	A lot
18. Funny feelings in my body scare me.	None	Some	A lot

Appendix E – Self-rated Emotional Avoidance
My Feelings

This is a list of some of the ways you might try to avoid or get away from uncomfortable feelings. Rate how true each statement is for you.

Not at all true of me 0	A little true of me 1	Somewhat true of me 2	Very true of me 3	Extremely true of me 4

1.	I do whatever I can to avoid feeling sad or worried or afraid.	0	1	2	3	4
2.	I try to make myself feel better in hard or stressful situations.	0	1	2	3	4
3.	I'll "lose it" if I don't distract myself from my feelings.	0	1	2	3	4
4.	When I feel upset, I watch TV or play on the internet to take my mind off of it.	0	1	2	3	4
5.	If I begin to feel upset, I try to do something else to take my mind off of it.	0	1	2	3	4
6.	I try to avoid uncomfortable situations.	0	1	2	3	4
7.	When I have thoughts and feelings I don't like, I try not to think of them.	0	1	2	3	4
8.	When something happens, I continue with my day and pretend nothing happened.	0	1	2	3	4
9.	I try to put upsetting things out of my mind, so that I won't keep thinking about them.	0	1	2	3	4
10.	I'd rather keep my opinion to myself than get into an argument or fight.	0	1	2	3	4
11.	Even if people ask what's bothering me, I pretend nothing's wrong.	0	1	2	3	4
12.	I try hard to forget about the things that make me worried or upset.	0	1	2	3	4
13.	To avoid having to make hard decisions, I stay aware from hard or stressful situations.	0	1	2	3	4
14.	I try not to seem sad even when I feel that way.	0	1	2	3	4
15.	When things do not go as well as I hoped, I try not to show that I am upset or sad about it.	0	1	2	3	4
16.	I have a hard time showing my true feelings.	0	1	2	3	4
17.	I try hard to calm myself down when I start getting angry.	0	1	2	3	4
18.	I often put off tasks that are important to me.	0	1	2	3	4

19	No matter how nervous or upset I am, I try to seem calm.	0	1	2	3	4
20.	I have a hard time telling others how much they mean to me.	0	1	2	3	4

Appendix F – Self-rated Internalizing
R-CADS-Reduced

A. I feel sad or empty…			
0 Never	1 Sometimes	2 Often	3 Always
B. I worry when I think I have done poorly at something…			
0 Never	1 Sometimes	2 Often	3 Always
C. Nothing is much fun anymore…			
0 Never	1 Sometimes	2 Often	3 Always
D. I worry I might look foolish…			
0 Never	1 Sometimes	2 Often	3 Always
E. I feel worried when I think someone is angry with me…			
0 Never	1 Sometimes	2 Often	3 Always
F. I am tired a lot…			
0 Never	1 Sometimes	2 Often	3 Always
G. I worry about what is going to happen…			
0 Never	1 Sometimes	2 Often	3 Always
H. I have problems with my appetite…			
0 Never	1 Sometimes	2 Often	3 Always
I. I worry that bad things will happen to me…			
0 Never	1 Sometimes	2 Often	3 Always
J. I feel scared when I have to take a test…			
0 Never	1 Sometimes	2 Often	3 Always
K. I worry that I will do badly at my schoolwork…			
0 Never	1 Sometimes	2 Often	3 Always

L. I cannot think clearly…			
0 Never	1 Sometimes	2 Often	3 Always
M. I worry something bad will happen to me…			
0 Never	1 Sometimes	2 Often	3 Always
N. I feel afraid if I have to talk in front of my class			
0 Never	1 Sometimes	2 Often	3 Always
O. I worry about what other people think of me…			
0 Never	1 Sometimes	2 Often	3 Always
P. I feel like I don't want to move…			
0 Never	1 Sometimes	2 Often	3 Always
Q. I worry about making mistakes…			
0 Never	1 Sometimes	2 Often	3 Always
R. I feel like I will make a fool of myself in front of people…			
0 Never	1 Sometimes	2 Often	3 Always
S. I feel restless…			
0 Never	1 Sometimes	2 Often	3 Always
T. I worry that something awful will happen to someone in my family…			
0 Never	1 Sometimes	2 Often	3 Always

U. I have no energy for things…			
0 Never	1 Sometimes	2 Often	3 Always
V. I worry about making mistakes…			
0 Never	1 Sometimes	2 Often	3 Always
W. I have trouble sleeping…			
0 Never	1 Sometimes	2 Often	3 Always
X. I feel worthless…			
0 Never	1 Sometimes	2 Often	3 Always
Y. I worry about things…			
0 Never	1 Sometimes	2 Often	3 Always

Appendix G – IRB Approval

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

November 26, 2013

MEMORANDUM

TO:	Timothy Cavell James Thomas Samantha Gregus Freddie Pastrana Juventino Hernandez Rodriguez
FROM:	Ro Windwalker IRB Coordinator
RE:	PROJECT CONTINUATION
IRB Protocol #:	06-11-102
Protocol Title:	*Peer Safety Project (PSP)*
Review Type:	☐ EXEMPT ☒ EXPEDITED ☐ FULL IRB
Previous Approval Period:	Start Date: 11/01/2006 Expiration Date: 12/04/2013
New Expiration Date:	12/04/2014

Your request to extend the referenced protocol has been approved by the IRB. If at the end of this period you wish to continue the project, you must submit a request using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. Failure to obtain approval for a continuation on or prior to this new expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

This protocol has been approved for 2200 total participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

210 Administration Building • 1 University of Arkansas • Fayetteville, AR 72701
Voice (479) 575-2208 • Fax (479) 575-3846 • Email irb@uark.edu